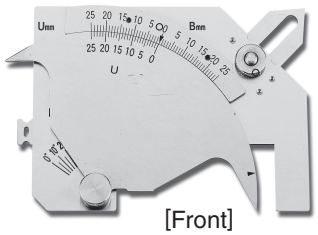
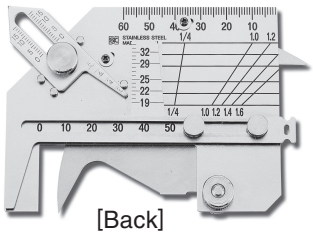
WELDING GAUGE

Proven Performance for all Welding Jobs!

Measurement Gauges for general welding, steel assembly, construction, fabrication, shipbuilding, bridges, etc.

WGU-9M


[Front]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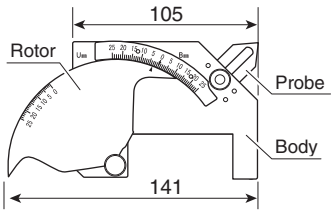
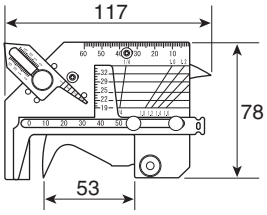
[Dimensions] (mm, approx.)





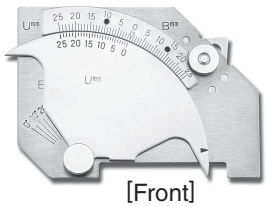
SPEC (WGU-9M)

●Thickness, Bead Width	: 0～50mm
●Round Object OD	: φ40mm
●Step Height Straddle Width	: 53mm
●Butt Step Height	: 0～25mm
●Undercut Depth	: 0～25mm
●Bevel Angle	: 0～70°
●Fillet Leg Length	: 0～25mm
●Fillet Throat Thickness (Probe)	: 0～15mm
●Gap Width (Probe)	: 2～5mm
●Width Scale	: 60mm
●Round Bar OD (Slider)	: φ19～35
●Expansion Guides (Body)	: 1/4～1.6x

FEATURES

- All the features of the WGU-8M, with additional functions for measuring rebar gas pressure weld joints - bulge length, diameter, and contact offset.
- The scale is marked with expansion amount for common rebar sizes for easy Pass/Fail determination from slider position right off the scale.
- Sharp point on undercut probe improves measurement accuracy.

WGU-7M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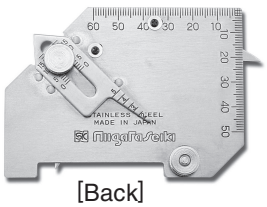
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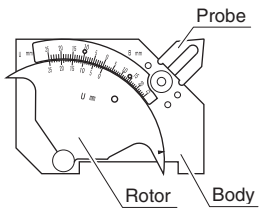
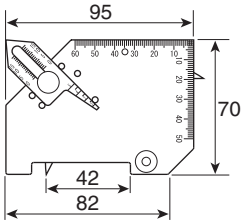
[Dimensions] (mm, approx.)

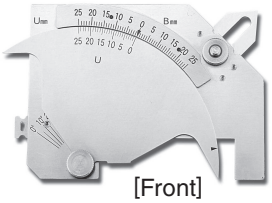




FEATURES

- Supports standard welding measurements.
- Easy to read design with Scale Plate and Rotor are on same plane.

WGU-8M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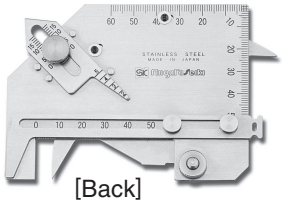
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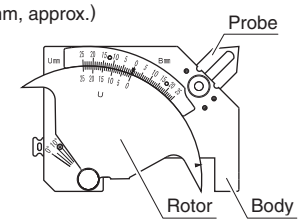
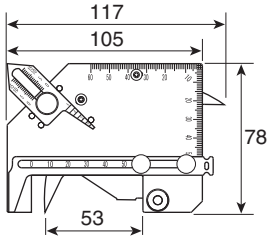
[Dimensions] (mm, approx.)

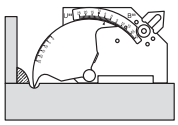


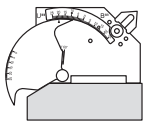


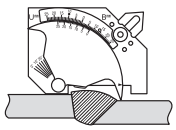
FEATURES

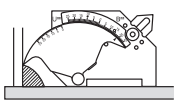
- All the features of the WGU-7M plus a caliper slide with a wide range of uses, including measuring plate thickness, weld bead width, and OD of round parts.
- Measures butt weld step alignment with up to 53mm straddle (per new Japan MLIT notification.)
- Measures bevel angles with expanded range of 0～70°

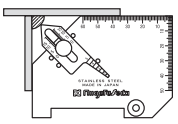
EXAMPLES ■ WGU-7M・8M・9M (common features)

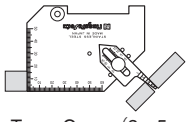

Undercut Depth
(0～25mm)


Bevel Angle
(WGU-7M　:0～60°)
(WGU-8M・9M:0～70°)

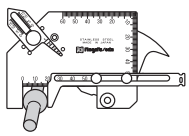

Step Height Straddle Width
(WGU-7M　:42mm)
(WGU-8M・9M:53mm)
Step Height　(0～25mm)

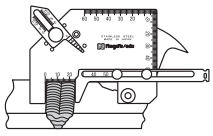

Fillet Leg Length &
Bead Height
(0～25mm)


Fillet Throat Thickness
(0～15mm)

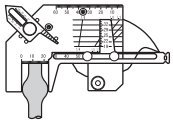

Taper Gauge (2～5mm)
Plate Thickness (Scale)

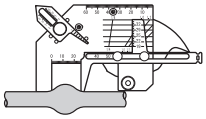
EXAMPLES ■ WGU-8M・9M (common features)

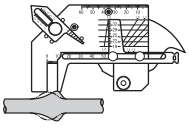

OD for Round Parts
(WGU-8M:up to φ30mm)
(WGU-9M:up to φ40mm)
Gas Pressure Welding Bulge, etc.


Bead Width
(WGU-8M:0～50mm)
(WGU-9M:0～50mm)

EXAMPLES ■ WGU-9M


Gas Pressure
Weld Expansion


Bulge Length


Contact Surface Offset

⚠ CAUTION:

- This is a precision measuring tool; Handle With Care.
- After use, coat with rust preventive oil before storage.
- Use only for intended purpose. Misuse may cause accident or injury.

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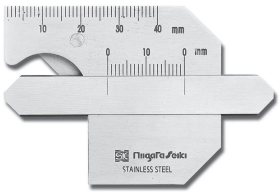
MAIL　intl.sales@niigataseiki.co.jp
URL　http://www.niigataseiki.co.jp

E324-T7 2011

WG-1(M)

FEAT.
- Makes welding QC work efficient and easy.
- Rugged and convenient. (Comes with plastic case.)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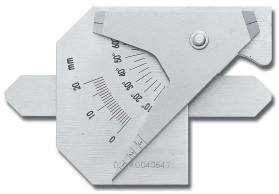
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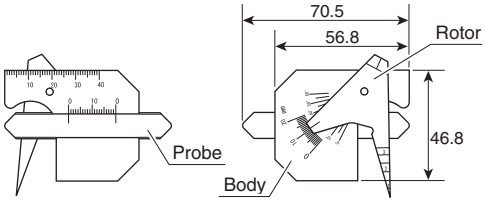
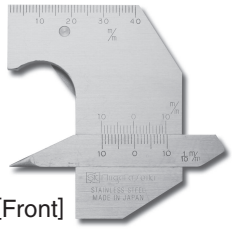
[Dimensions]
(mm, approx.)



WG-2(L)

FEAT.
- Makes welding QC work efficient and easy.
- Rugged and convenient. (Comes with plastic case.)
- With convenient undercut function.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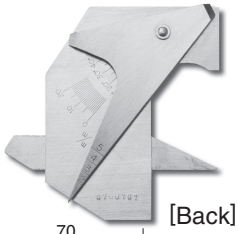
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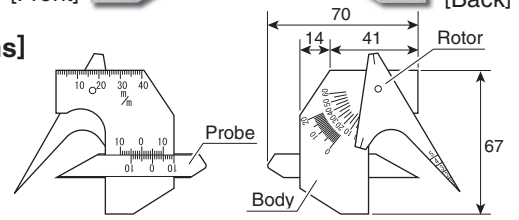
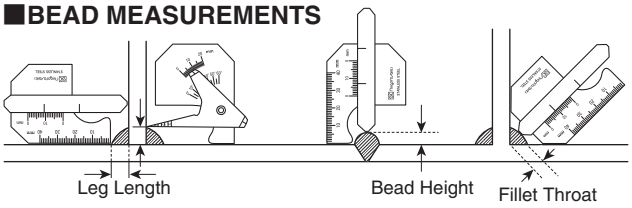
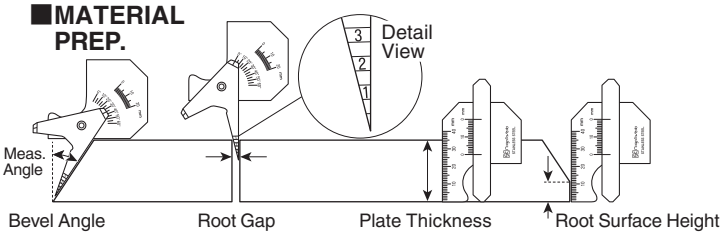
[Dimensions]
(mm, approx.)



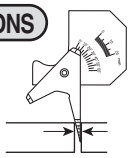
EXAMPLES ■BEAD MEASUREMENTS

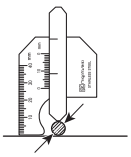


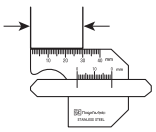
■MATERIAL PREP.

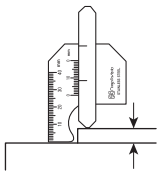


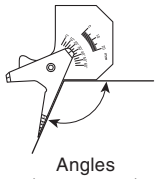
APPLICATIONS


Gap・Hole
(WG-1 (M) : ≦3.0mm
WG-2 (L) : ≦5.0mm)

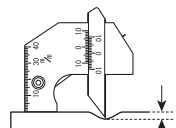

Rod OD
(WG-1 (M) : ≦φ10mm
WG-2 (L) : ≦φ20mm)


Length
(≦40mm)

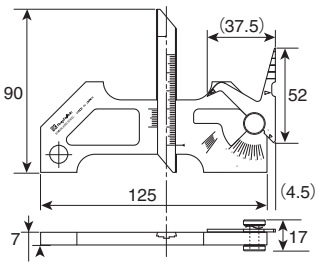

Step・Thickness
(≦20mm)


Angles
(Reading+90°)

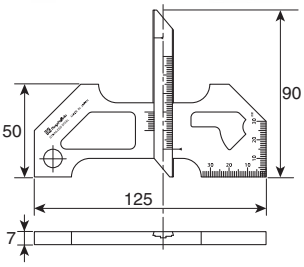
UNDERCUT


※WG-2 only (10mm)

WG-3



WG-5

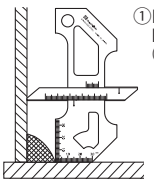


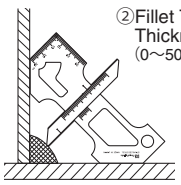
FEATURES
- The latest product in the WG Series! Updated design for improved usability.
- The longest measurement range of available welding gauges. (※)

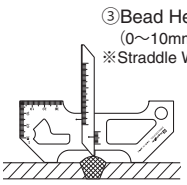
※Based on Leg Length and Throat Thickness, July 2012 market survey.

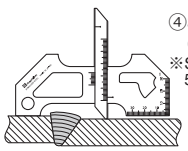
[Dimensions]
(mm, approx.)

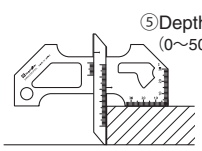
EXAMPLES ■WG-3・WG-5 (common features)

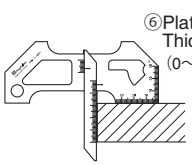

①Fillet Weld Leg Length
(0～50mm)


②Fillet Throat Thickness
(0～50mm)

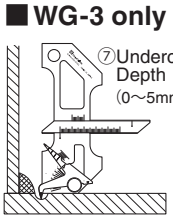

③Bead Height
(0～10mm)
※Straddle Width : 60mm

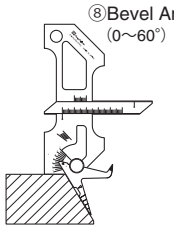

④Step Height
(0～50mm)
※Straddle Width: 53mm

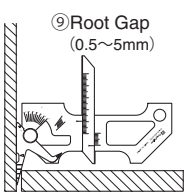

⑤Depth・Step
(0～50mm)


⑥Plate Thickness
(0～35mm)

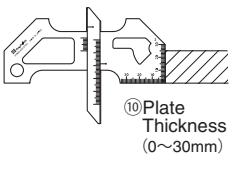
■WG-3 only


⑦Undercut Depth
(0～5mm)

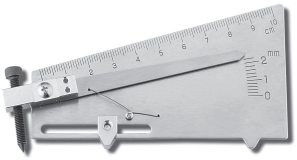

⑧Bevel Angle
(0～60°)


⑨Root Gap
(0.5～5mm)

■WG-5 only

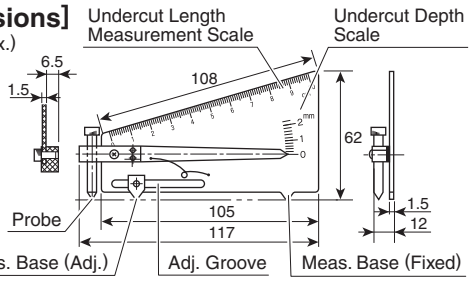

⑩Plate Thickness
(0～30mm)

WGU-2S ▶ UNDERCUT GAUGE



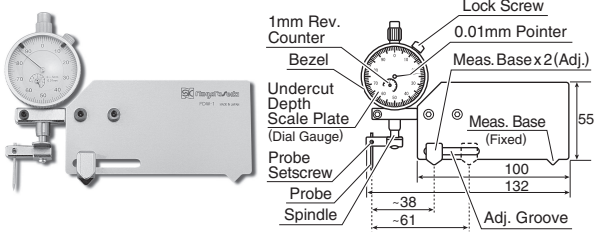
FEATURES
- Fast and easy measurement of undercut depth and length.
- High accuracy: 0～2mm range (0.2mm graduations.)

[Dimensions]
(mm, approx.)



FDW-1 ▶ UNDERCUT GAUGE

[Dimensions] (mm, approx.)



FEATURES
- Fast and accurate one-touch undercut measurements.
- Dial Gauge for high accuracy. (Uses a standard 0.01mm Dial Gauge.)
- Meas. Range = 0 to 4.00mm (0.01mm graduations, ±0.04mm accuracy.)
- 3-point base for stability and accuracy.
- Adjustable measurement base for different surface conditions.
- Measurement base slide range, ~23mm.
- Hex wrench included for 0-Point adjustment and Dial Gauge replacement.

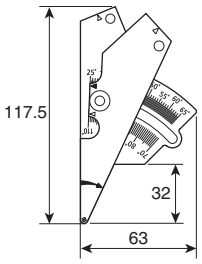
ANGLE GAUGE WGA-65

FEATURES

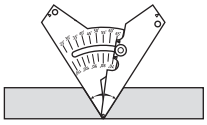
- Direct measurement of joint groove angle.
- Bevel gauge has sharp tip to measure angles for 0mm root gap for 15mm plates, or thinner.
- Easy to read, large scale has 0.5°graduations.
- Notched scale plate for measuring T-joints without interference.
- Satin finish measurement scale for high visibility in the field.
- Rugged and convenient. (Comes with plastic case.)

[Dimensions]

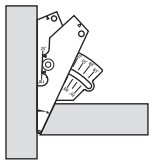
(mm, approx.)



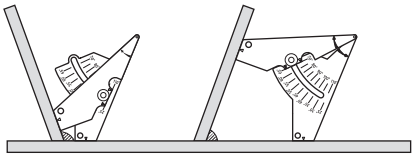
EXAMPLES



Butt Joint Groove Angle
Plate. 30mm, Angle 65° (Max.)



T-Joint Groove Angle
Plate 30mm, Angle 25° (Min.)



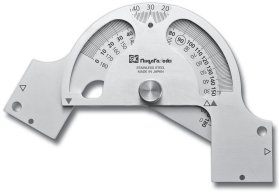
Weld Joint Angle
Angle 110° (Max.)

Weld Joint Angle
Angle 70° (Min.)

SPECS

- Accuracy : ±0.5°
- Groove Angle : 25°～65°
  (Graduations : 0.5°)
- Joint • Stud Angle
  After Welding : 70°～110°
  (Graduations : 1°)

ANGLE PROTRACTOR AP-130

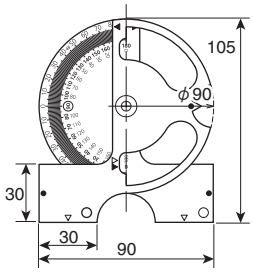


FEATURES

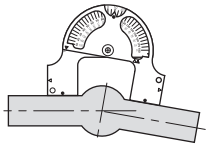
- Wide range of angle measurements for welding operations.
- Measures angles directly without interference from weld bead.
- Measures interior and deflection angles for sheet metal bending operations.
- Satin finish for easy to read measurement scale.
- Rugged and convenient. (Comes with plastic case.)

[Dimensions]

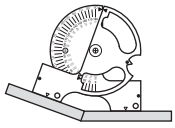
(mm, approx.)



EXAMPLES



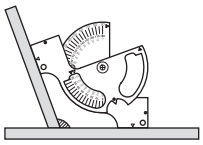
Rebar Butt Joint Angle
Angle = 10°
(Range: 0～90°)



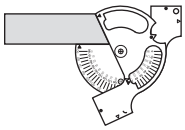
Flange, Plate Joint Angle
Angle = 160°
(Range: 0～180°)

SPECS

- Accuracy : ±0.5°
- Groove (Bevel) Angle :
  Scissors Mode 30°～130°
- Graduations : 1°
- Butt Joint, Pressure Weld
  Deflection Angle : 0°～90°
- Welded Stud, Flange Angle :
  0°～180°

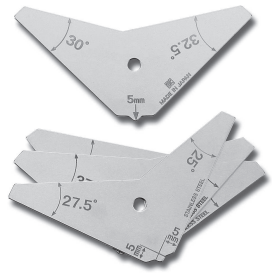


Weld Joint Angle
Angle = 110°
(Range: 0～180°)

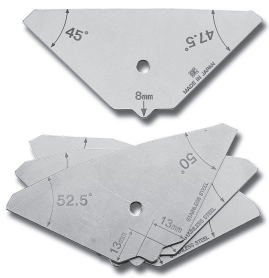


Scissors Mode
Angle = 65°
(Range; 30～130°)

ANGLE LIMIT GAUGE WAL 2542•4562



[WAL2542]



[WAL4562]

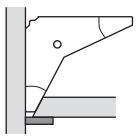
FEATURES

- Fast Pass/Fail testing of groove angle and fillet weld size.
- Set of 4 in plastic case.
- Includes ball chain.

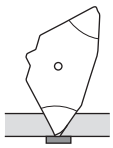
SPECS

- Accuracy: Length, Depth: ±0.1mm, Angle: ±1°
- Groove Angle: 25°～62.5° (2.5°steps)
- Fillet Throat Depth: 4～11mm (1mm steps)
- Fillet Leg Length: 5, 7, 8, 10, 11, 13, 14, 15mm

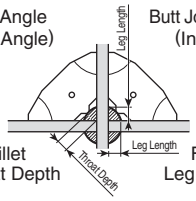
EXAMPLES



Groove Angle
(Internal Angle)



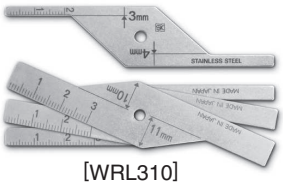
Butt Joint Groove Angle
(Internal Angle)



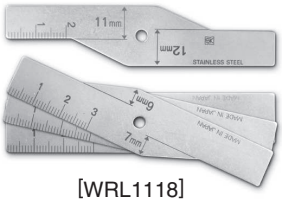
Fillet
Throat Depth

Fillet
Leg Length

ROOT GAP LIMIT GAUGE WRL310 • 1118



[WRL310]



[WRL1118]

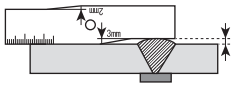
FEATURES

- Fast Pass/Fail testing of root gap and bead height.
- Set of 4 in plastic case.
- Includes ball chain.

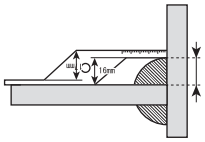
SPECS

- Accuracy : ±0.1mm
- Root Gap : 3～18mm
- Bead Height • Leg Length : 2～17mm
- Meas. Scale : 20mm

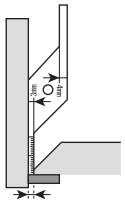
EXAMPLES



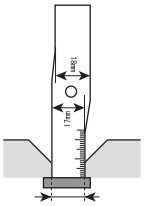
Butt Joint
Bead Height



Fillet Leg Length

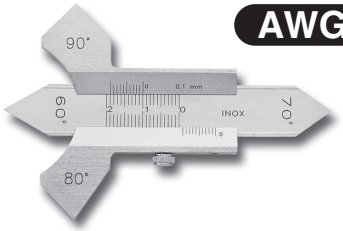


T-Joint Root Gap



Butt Joint Root Gap

AWG-10

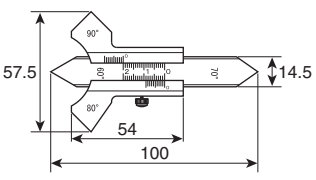


FEAT.

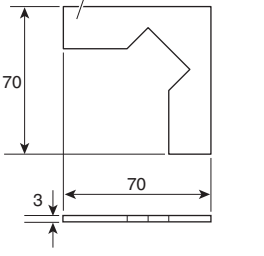
- Measures fillet throat depth and bead height with ease.
- Easy to read digital version GDCS-20WG also supports communication via separately available Bluetooth Box.

[Dimensions]

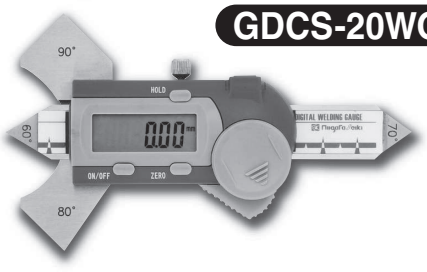
(mm, approx.)

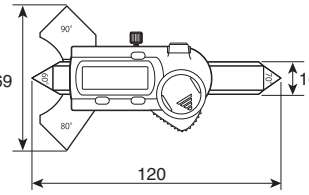


Calibration Master
(GDCS-20WG Accessory)

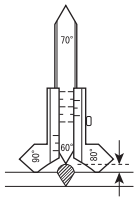


GDCS-20WG

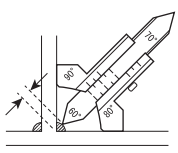




■ BEAD MEASUREMENT

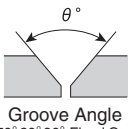


Bead Height
(AWG-10: Max.: 8mm
GDCS-20WG: Max.: 10mm)

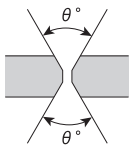


Throat Depth
(AWG-10: Max.: 11mm
GDCS-20WG: Max.: 20mm)

■ MATERIAL PREP.

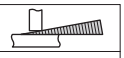
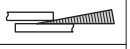
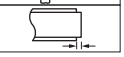
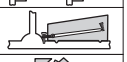
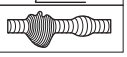


Groove Angle
(60°,70°,80°,90° Fixed Gauges)



PATENTED WELDING GAUGES FOR ALL APPLICATIONS

●Measurement and Product Cross Reference

Measurement	No.	Description	Diagram	Taper Gauge	WG-1	WG-2	WG-3	WG-5	WGU-7M	WGU-8M	WGU-9M	WGU-2S	FDW-1	WRL310 WRL1118	WAL2542 WAL4562	AWG-10	GDCS-20WG	WGA-65	AP-130
Machining and Assembly (Material Prep.)	1	T-Joint Gap		○	○	○	○	—	○	○	○	—	—	○	—	—	—	—	—
	2	Lap Joint Gap		○	○	○	○	—	○	○	○	—	—	○	—	—	—	—	—
	3	Butt Joint Step		○	○	○	○	—	○	○	○	—	—	○	—	—	—	—	—
	4	Root Gap		○	○	○	○	—	○	○	○	—	—	○	—	—	—	—	—
	5	T-Joint Root Gap		—	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—
	6	Root Surface		—	○	○	○	○	○	○	○	○	—	○	—	—	—	—	—
	7	Bevel Angle		—	○	○	○	—	○	○	○	—	—	—	—	—	—	—	○
	8	Groove Angle		—	—	—	—	—	—	—	—	—	—	—	○	○	○	○	—
	9	T-Joint Groove Angle		—	—	—	—	—	—	—	—	—	—	—	○	—	—	○	—
	10	Edge Misalignment		—	○	○	○	○	○	○	○	—	—	—	—	—	—	—	—
Post Weld	11	Fillet Leg Length		—	○	○	○	○	○	○	○	—	—	○	○	—	—	—	—
	12	Fillet Throat Thick.		—	○	○	○	○	○	○	○	—	—	—	○	○	○	—	—
	13	Butt Bead Height		—	○	○	○	○	○	○	○	—	—	○	—	○	○	—	—
	14	T-Joint Bead Height		—	○	○	○	○	○	○	○	—	—	○	—	○	○	—	—
	15	Undercut		—	—	○	○	—	○	○	○	○	○	—	—	—	—	—	—
	16	Butt Joint Misalignment		—	—	○	○	○	○	○	○	—	—	—	—	—	—	—	—
	17	Butt Joint Angle		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	○
	18	Flange Angle		—	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	19	Stud Angle		—	—	—	—	—	—	—	—	—	—	—	—	—	—	○	○
	20	Bead Surface Irregularity		—	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—
Pressure Weld	21	Swell Diameter		—	—	—	—	—	—	△※	○	—	—	—	—	—	—	—	—
	22	Swell Length		—	—	—	—	—	—	△※	○	—	—	—	—	—	—	—	—
	23	Contact Surface Offset		—	—	—	—	—	—	△※	○	—	—	—	—	—	—	—	—
	24	Angle		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	○

※Calculation of desired dimension value required for gas pressure welding.

●Welding Gauge Specifications

Model	Material	Meas. Scale	Bead Height	Leg Length	Throat Thickness	Undercut Depth	Root Gap	Bead Width	Bar OD	Length Accuracy	Groove (Bevel) Angle	Butt Angle	Flange, Stud Angle	Angle Accuracy
WG-1	Stainless 4.3mm Plate	40mm	10mm	20mm	10mm	—	0.5～3mm	—	10mm	±0.4mm	0～60°, Grad.: 5°	—	—	±0.7°
WG-2	Stainless 4.3mm Plate			10mm 0.1 graduations		10mm	0.5～5mm		20mm	± 0.2mm (For Gaps: ± 0.4mm)				
WG-3	Stainless 7mm Plate Satin Finish	—	10mm	50mm	50mm	5mm	0.5～5mm	—	10mm	±0.4mm	0～60°, Grad.: 5°	—	—	±0.7°
WG-5		30・35mm				—	—				—			—
WGU-7M	Stainless 1.5mm Plate	50・60mm	25mm	25mm	15mm	25mm	2～5mm	—	—	±0.6mm	0～60°, Grad.: 5°	—	—	±2°
WGU-8M	Stainless 1.5mm Plate							0～50mm	30mm		0～70°, Grad.: 5°	—	—	
WGU-9M	Stainless 1.5mm Plate	60mm							40mm					
WGU-2S	Stainless 1.5mm Plate	100mm	—	—	—	2mm (Accy: ±0.1mm)	—	—	—	±0.6mm	—	—	—	—
FDW-1	Stainless 1.5mm Plate	—				4mm (Accy: ±0.04mm)				—				
AWG-10	Body: 5mm Stainless Probe: 1.9mm	—	8mm	—	11mm	—	—	—	—	±0.2mm	60・70・80・90°	—	—	—
GDCS-20WG	Body:5.7mm Stainless Probe:3.2mm Plastic Display Unit		10mm		20mm					±0.03mm				
WRL310	Stainless 2mm Plate	20mm	10～17mm (1mm steps)	10～17mm (1mm steps)	—	—	3～10mm (1mm steps)	—	—	±0.1mm	—	—	—	—
WRL1118	Stainless 2mm Plate		2～9mm (1mm steps)	2～9mm (1mm steps)			11～18mm (1mm steps)							
WAL2542	Stainless 1.5mm Plate	—	—	5・7・8・10mm (fixed)	4～7mm (1mm steps)	—	—	—	—	±0.1mm	25・27.5・30・32.5 35・37.5・40・42.5°	—	—	±1°
WAL4562	Stainless 1.5mm Plate			11・13・14・15mm (fixed)	8～11mm (1mm steps)						45・47.5・50・52.5 55・57.5・60・62.5°			
WGA-65	Stainless 1.5mm Plate Satin Finish	—	—	—	—	—	—	—	—	—	25～65°, Grad.: 0.5°	—	70～110°	±0.5°
AP-130											(Scissors Mode) 30～130°, Grad: 1°	0～90°	0～180°	